

S/N 10/607,818

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Robert J. Sweeney et al.	Examiner:	Joseph Stoklosa
Serial No.:	10/607,818	Group Art Unit:	3762
Filed:	June 27, 2003	Docket:	279.636US1
Customer No.	45458	Confirmation No.:	8382
Title:	TACHYARRHYTHMIA DETECTION AND DISCRIMINATION BASED ON CURVATURE PARAMETERS		

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Commissioner for Patents
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Appellant requests review of the final rejection in the above-identified application in the Final Office Action dated October 5, 2009 (hereinafter “the Final Office Action”) and the Advisory Action dated January 27, 2010 (hereinafter “the Advisory Action”). No amendment is being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reasons stated below:

This Pre-Appeal Brief Request for Review responds to the Final Office Action and the Advisory Action. No claim is amended. Claims 1-18, 25-27, and 58-61 remain pending in this application.

§ 112 Rejection of the Claims

Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Appellant respectfully asserts that the issue raised in the rejection has been overcome by the amendment to claim 1 made in Appellant’s Amendment and Response filed on December 18, 2009. However, the Advisory Action is silent as to whether the rejection under 35 U.S.C. §112 is maintained or withdrawn.

Appellant respectfully requests reversal of the rejection and allowance of claims 1-5.

§ 103 Rejection of the Claims

The Examiner improperly considers the computation of a curvature series to simply be the signal acquisition and the generation of the characteristic points to relate to assembly of the sample points, and fails to consider all of the language of the claims.

The Advisory Action states, in paragraph 3: “Examiner has considered the computation of a curvature series to simply be the signal acquisition and the generation of the characteristic points to relate to assembly of the sample points.” This appears to be a necessary basis for the entire reasoning given in the Office Action and the Advisory Action to support the following rejections of all the pending claims:

Rejection of claims 1-3, 6, 9, 13, 14, 17, 18, 25, 58, 59, and 60 under 35 U.S.C. § 103(a) as being unpatentable over Sweeney (U.S. Patent No. 4,996,984, hereinafter “Sweeney”) in view of Leon et al. (U.S. Patent No. 5,365,934, hereinafter “Leon”);

Rejection of claims 4-5, 11-12, 15, 16, and 61 under 35 U.S.C. § 103(a) as being unpatentable over Sweeney in view of Leon as applied above; and

Rejection of claims 7-8, 10, and 26-27 under 35 U.S.C. § 103(a) as being unpatentable over Sweeney in view of Leon as applied above in view of Marcus (U.S. Patent No. 4,637,400, hereinafter “Marcus”).

However, for at least the reasons discussed with respect to the pending independent claims as follows, it is clearly erroneous to consider the computation of the curvature series as recited in the pending claims “to simply be the signal acquisition” of the cited reference.

Claim 1 recites a controller adapted to compute a curvature series using sample data points, wherein the curvature series includes curvatures each computed as a non-linear function of first and second derivatives of a sampled signal at one of the sample data points, and the controller is adapted to compute the first and second derivatives and the curvatures. However, Appellant is unable to find in Sweeney and Leon, individually or in combination, a “signal acquisition” that uses a controller to compute the first and second derivatives and the curvatures.

Claim 6 recites calculating a series of curvatures each as a non-linear function of first and second derivatives of the cardiac signal at one of the sample data points. However, Appellant is unable to find in Sweeney and Leon, individually or in combination, a “signal acquisition” that

includes calculating a series of curvatures each as a non-linear function of first and second derivatives of a cardiac signal at one of the sample data points.

Claim 13 recites using a processor to generate a curvature series by computing curvatures each as a non-linear function of first and second derivatives at a sample point of a sampled input signal. However, Appellant is unable to find in Sweeney and Leon, individually or in combination, a “signal acquisition” that includes computing curvatures each as a non-linear function of first and second derivatives at a sample point of a sampled input signal.

Claim 25 recites generating a curvature series using sampled data points by computing curvatures each as a non-linear function of first and second derivatives of a sampled cardiac signal at one of the sampled data points. However, Appellant is unable to find in Sweeney and Leon, individually or in combination, a “signal acquisition” that includes computing curvatures each as a non-linear function of first and second derivatives of a sampled cardiac signal at one of sampled data points.

Claim 58 recites generating a first curvature series using first sampled data points by calculating curvatures each as a non-linear function of first and second derivatives of a first sampled signal at one of the first sampled data points, and generating a second curvature series using second sampled data points by calculating curvatures each being a non-linear function of first and second derivatives of the second sampled signal at one of the second sampled data points. However, Appellant is unable to find in Sweeney and Leon, individually or in combination, a “signal acquisition” includes computing curvatures each as a non-linear function of first and second derivatives of a sampled signal at one of sampled data points.

With respect to all the pending independent and dependent claims, Appellant is also unable to find in the Office Action, the Advisory Action, and Marcus a reason that addresses such deficiencies of the cited Sweeney and Leon. Thus, it is believed that Sweeney and Leon, individually or in combination, do not provide a “signal acquisition” that includes the computation of the curvature series as recited in the pending claims.

Therefore, it is respectfully submitted that the reasoning supporting the rejection of all pending claims as given in the Office Action and the Advisory Action is clearly in error. Consequently, Appellant respectfully maintains its position as discussed in the Amendment and Response filed on December 18, 2009, the Remarks of which are incorporated herein to reiterate the discussion supporting patentability of all the pending claims.

Appellant respectfully requests reversal of the rejection and allowance of claims 1-18, 25-27, and 58-61.

CONCLUSION

Appellant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (612) 373-6965 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date February 5, 2010 By /Zhengnian Tang/
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 5th day of February, 2010.

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Name

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